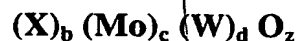


### CLAIMS:

1. A process for hydrofining a lubricating oil feedstock which comprises:

contacting the feedstock with a hydrofining catalyst in a hydrofining zone under hydrofining conditions wherein the hydrofining catalyst comprises a bulk metal catalyst containing non-noble Group VIII metal molybdate in which at least a portion but less than all of the molybdenum is replaced by tungsten.

2. The process of claim 1 wherein the bulk metal catalyst is represented by the formula:



wherein X is non-noble Group VIII metal, the molar ratio of b: (c+d) is 0.5/1 to 3/1, the molar ratio of c:d is >0.01/1, and  $z = [2b + 6(c + d)]/2$ .

3. The process of claim 2 wherein the molar ratio of b:(c+d) is 0.75/1 to 1.5/1.

4. The process of claim 3 wherein the molar ratio of b:(c+d) is 0.75/1 to 1.25/1.

5. The process of claim 2 wherein the molar ratio of c:d is  $>0.1/1$ .

6. The process of claim 5 wherein the molar ratio of c:d is 1/10 to 10/1.

7. The process of claim 6 wherein the molar ratio of c:d is 1/3 to 3/1.

[illegible]

8. The process of claim 1 wherein the hydrofining conditions include temperatures of from 200 to 400 °C, hydrogen pressures of from 150 to 3500 psig (1136 to 24234 kPa), liquid hourly space velocities of from 0.5 to 5 and hydrogen treat gas rates of from 100 to 5000 scf/B (17.8 to 890 m<sup>3</sup>/m<sup>3</sup>).
9. The process of claim 1 wherein the hydrofining catalyst contains from 5 to 95 wt.%, based on hydrofining catalyst, of a hydrotreating catalyst containing at least one Group VIB and at least one non-noble metal Group VIII metal on a refractory oxide support.
10. The process of claim 9 wherein the hydrotreating catalyst comprises at least one of molybdenum and tungsten and at least one of cobalt and nickel.
11. The process of claim 9 wherein the bulk metal catalyst and the hydrotreating catalyst are in separate beds.
12. The process of claim 1 wherein the hydrofining of the feedstock selectively removes nitrogen and sulfur containing compounds.
13. The process of claim 1 wherein the hydrofining of the feedstock improves the color and stability of the feedstock.
14. The process of claim 1 wherein the hydrofining of the feedstock removes solvent contaminants in the feedstock.
15. The process of claim 2 wherein X is Ni or Co.

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16. The process of claim 2 wherein X is Ni.

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*Accepted  
Abstract*